Lower Elwha Klallam Tribal Projects

Lower Elwha Klallam Tribal Projects – **New Hatchery and Pipeline Project**
Text for inclusion in the Elwha River Restoration Project JARPA
All bold text is copied from the JARPA application. All responses are in normal text.

SECTION A

4. NAME, ADDRESS, AND PHONE NUMBER OF PROPERTY OWNER(S), IF OTHER THAN APPLICANT.
Lower Elwha Klallam Tribe

5. LOCATION (STREET ADDRESS, INCLUDING CITY, COUNTY AND ZIP CODE, WHERE PROPOSED ACTIVITY EXISTS OR WILL OCCUR)
Lower Elwha Indian Reservation, Port Angeles, Clallam County, Washington 98363

LOCAL GOVERNMENT WITH JURISDICTION (CITY OR COUNTY)
Lower Elwha Klallam Tribal Community

WATERBODY
Elwha River

TRIBUTARY OF
N/A

WRIA#
18

¼ SECTION
NE1/4

SECTION
34

TOWNSHIP
31N

RANGE
7W

SHORELINE DESIGNATION
Conservancy

ZONING DESIGNATION
Tribal Lands and RCC5 – Rural Character Conservation 5

DNR STREAM TYPE, IF KNOWN
F

6. DESCRIBE THE CURRENT USE OF THE PROPERTY, AND THE STRUCTURES EXISTING ON THE PROPERTY. IF ANY PORTION OF THE PROPOSED ACTIVITY IS ALREADY COMPLETED ON THIS PROPERTY, INDICATE THE MONTH AND YEAR OF COMPLETION.

The site is currently undeveloped. In the past there was a residence on the property, though only the slab-on-grade foundation remains. To date, no part of this project has been completed.

IS THIS PROPERTY ON AGRICULTURAL LAND?
No

ARE YOU A USDA PROGRAM PARTICIPANT?
No

7.a. DESCRIBE THE PROPOSED CONSTRUCTION AND/OR FILL WORK FOR THE PROJECT THAT YOU WANT TO BUILD THAT NEEDS AQUATIC PERMITS: COMPLETE PLANS AND SPECIFICATIONS SHOULD BE PROVIDED FOR ALL WORK WATERWARD OF THE ORDINARY HIGH WATER MARK OR LINE, INCLUDING TYPES OF EQUIPMENT TO BE USED. IF APPLYING FOR A SHORELINE PERMIT, DESCRIBE ALL WORK WITHIN AND BEYOND 200 FEET OF THE ORDINARY HIGH WATER MARK. ATTACH A SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED.

The Elwha Fish Hatchery Project includes construction of a fish hatchery including fish production facilities, building, ponds and related structures on the landward side of the existing federal levee. The only element of the project that will be subject to an aquatic permit is the entrance channel from the Elwha River to the fish ladder that leads to the hatchery. A natural-type channel will be built approaching the fish ladder entrance. The final 15 feet of the natural channel approach are located waterward of the ordinary high water mark. Construction will include excavation and placement of river gravel within the approach channel. A hydraulic excavator or similar conventional earthmoving equipment will be used to excavate the channel and place the gravel. All excavation below the water level will occur within a silt fence to protect the Elwha River from sediment and turbidity. This work will be performed by a hydraulic excavator working from the bank. No construction equipment will be operated in the water. Riparian plantings will be placed on the slopes of the excavated area to restore the site's new channel slopes.

7.b. DESCRIBE THE PURPOSE OF THE PROPOSED WORK AND WHY YOU WANT OR NEED TO PERFORM IT AT THE SITE. PLEASE EXPLAIN ANY SPECIFIC NEEDS THAT HAVE INFLUENCED THE DESIGN.

The purpose of the proposed Elwha Fish Hatchery is to provide salmon stocks for ecosystem restoration and harvest in the Elwha River watershed. The entrance channel is necessary to allow returning adult salmon to reach the fish hatchery and for the release of juvenile fish to the Elwha River.

Based on projections of future water surface elevations done by the Corps of Engineers, the Elwha River water surface is expected to rise after the removal of the Glines Canyon and Elwha dams due to the re-distribution of sediments collected behind the dams. Based on these projections, it is anticipated that the existing hatchery site will be inundated by flood waters even during minor flood events. To mitigate this situation, the proposed hatchery site is located further upstream and at a site with higher elevations than the existing site.

7.c. DESCRIBE THE POTENTIAL IMPACTS TO THE CHARACTERISTIC USES OF THE WATER BODY. THESE USES MAY INCLUDE FISH OR AQUATIC LIFE, WATER QUALITY, WATER SUPPLY, RECREATION AND AESTHETICS. IDENTIFY PROPOSED ACTIONS TO AVOID, MINIMIZE, OR MITIGATE DETRIMENTAL IMPACTS, AND PROVIDE PROPER PROTECTION OF FISH AND AQUATIC LIFE. ATTACH A SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED.

Short-term Impacts due to Construction Include:

- Temporary increase in suspended sediments and turbidity potentially affecting fish and aquatic life and water quality.
- Localized modification of river hydrology potentially affecting fish and aquatic life.
- Temporary removal of riparian vegetation potentially affecting aquatic life and the aesthetic character of the riparian area.

Long-term Impacts Include:

- Alteration of the character of the streambed and the river hydrology affecting fish and aquatic life.
- Potential increase in fish populations in the watershed through the release of hatchery fish.

Mitigation Measures during Construction Include:

- Minimizing the impacts to existing, healthy vegetation to the extent possible.
- Use of proactive and reactive BMP's at the site.
- Use of berms, dikes and silt fencing to isolate the construction area from the river.
- Work during low flow conditions.
- Work within fish windows established by WDFW.
- Mulches and erosion control fabrics will be used in highly erosive areas.
- Use of bioengineered techniques for river bank stability where practicable.
- Boulders and woody debris may be strategically placed along the bank to provide dispersion of surface runoff and to create micro-habitats for plant and wildlife species.

Mitigation Measures for Long-Term Impacts Include:

- Selected riparian plant species will be compatible with the overall management objectives of the Elwha River corridor. Sample species include Big-Leaf Maple (*Acer macrophyllum*), Red Alder (*Alnus Rubra*), Salal (*Gaultheria Shallon*), Low Oregon Grape (*Mahonia Nervosa*), Sedge (*Carex Sp*.), and Tufted Hairgrass (*Deschampsia Caespitosa*). .
- Plant species will be carefully matched to the soil and sun exposure for which they are best suited.
- Use of local nursery stocks will be emphasized.

8. WILL THE PROJECT BE CONSTRUCTED IN STAGES?
Yes, the Elwha Fish Hatchery Project will be constructed separately from other elements of the project.

PROPOSED STARTING DATE:
Hatchery construction will occur beginning in mid-2006. The exact starting date will be determined based on issuance of the necessary permits and completion of the design. Construction of the entrance channel is expected to occur in the summer of 2007.

ESTIMATED DURATION OF ACTIVITY:
Overall hatchery construction will require approximately 18 months, construction of the entrance channel will required 3 months.

9. CHECK IF ANY STRUCTURES WILL BE PLACED:

WATERWARD OF THE ORDINARY HIGH WATER MARK OR LINE FOR FRESH OR TIDAL WATERS.
Yes

WATERWARD OF MEAN HIGH WATER LINE IN TIDAL WATERS
No

10. WILL FILL MATERIAL (ROCK, FILL, BULKHEAD, OR OTHER MATERIAL) BE PLACED:

WATERWARD OF THE ORDINARY HIGH WATER MARK OR LINE FOR FRESH OR TIDAL WATERS.
Yes

WATERWARD OF MEAN HIGH WATER LINE IN TIDAL WATERS.
No

11. WILL MATERIAL BE PLACED IN WETLANDS?
Yes. *(Note: Impacts to wetlands LA3-2 and LA3-3 are included in the levee impact tabulation and are not repeated here to avoid duplication of total area.)*

IF YES,

A. IMPACTED AREA IN ACRES: *Impacts to wetlands LA3-2 and LA3-3 are included in the levee impact tabulation and are not repeated here to avoid duplication of total area.*

B. HAS A DELINEATION BEEN COMPLETED? IF YES, PLEASE SUBMIT WITH APPLICATION.
Yes

C. HAS A WETLAND REPORT BEEN PREPARED? IF YES, PLEASE SUBMIT WITH APPLICATION.
Yes

D. TYPE AND COMPOSITION OF FILL MATERIAL (E.G. SAND, ETC):
Graded fill material for pipeline backfill

E. MATERIAL SOURCE:
Materials will be acquired locally from approved sand and gravel operators.

G. WILL PROPOSED ACTIVITY CAUSE FLOODING OR DRAINING OF WETLANDS?
Yes, construction of the water supply pipeline will result in draining of wetlands LA3-2 and LA3-3. These wetlands will also be impacted due to levee embankment material placement as part of the flood protection levee component of the project.

13. WILL EXCAVATION OR DREDGING BE REQUIRED IN WATER OR WETLANDS?
Yes, construction of the entrance channel will require excavation in the Elwha River and construction of the water supply pipeline will require excavation in wetlands LA3-2 and LA3-3.

A. VOLUME: 1,100 cubic yards from wetlands, 100 cubic yards for the entrance channel.
AREA: 0.4 acres of wetlands, 0.01 acres waterward of ordinary high water for the entrance channel.

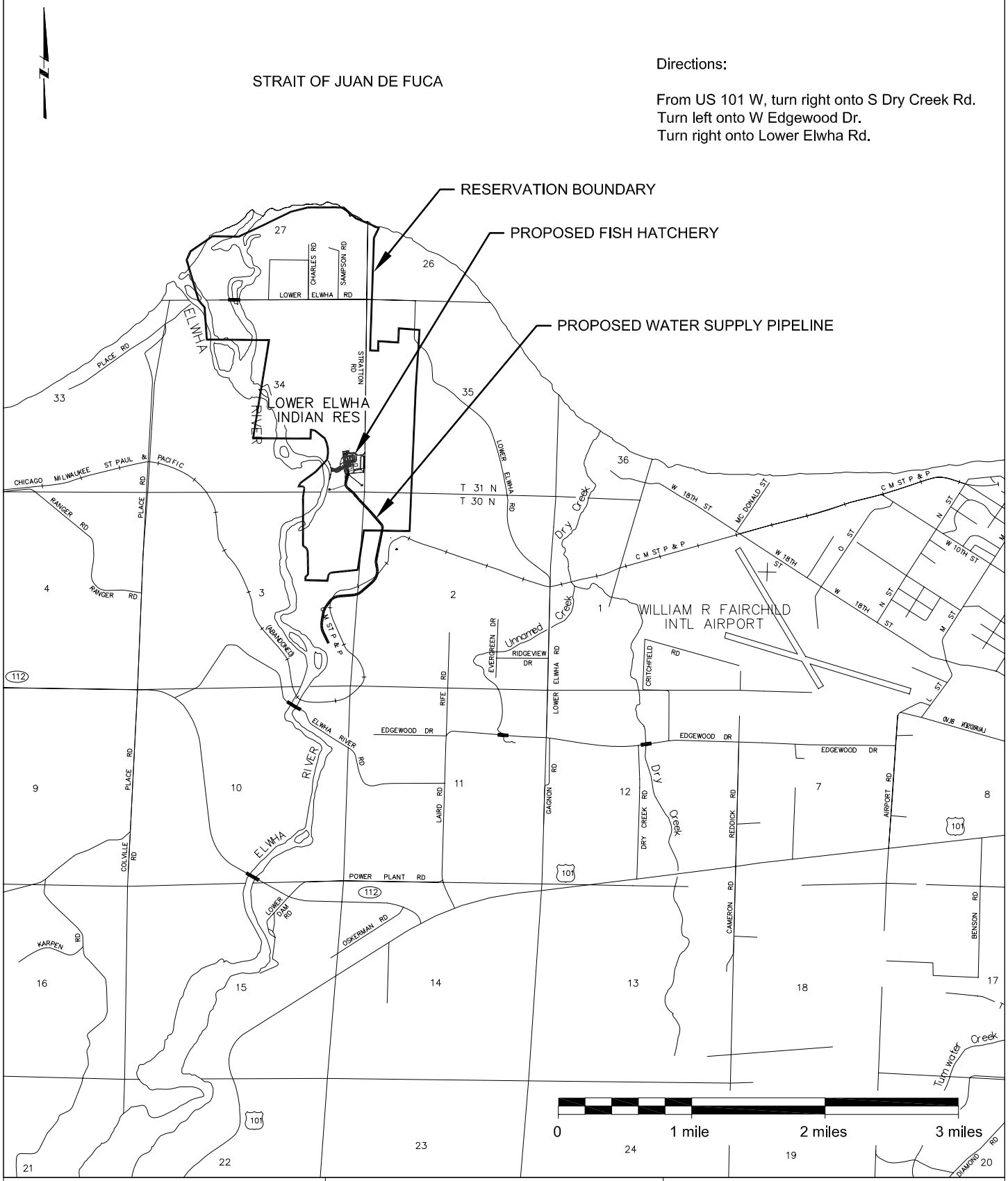
B. COMPOSITION OF MATERIAL TO BE REMOVED:
River alluvium and topsoil

C. DISPOSAL SITE FOR EXCAVATED MATERIAL:

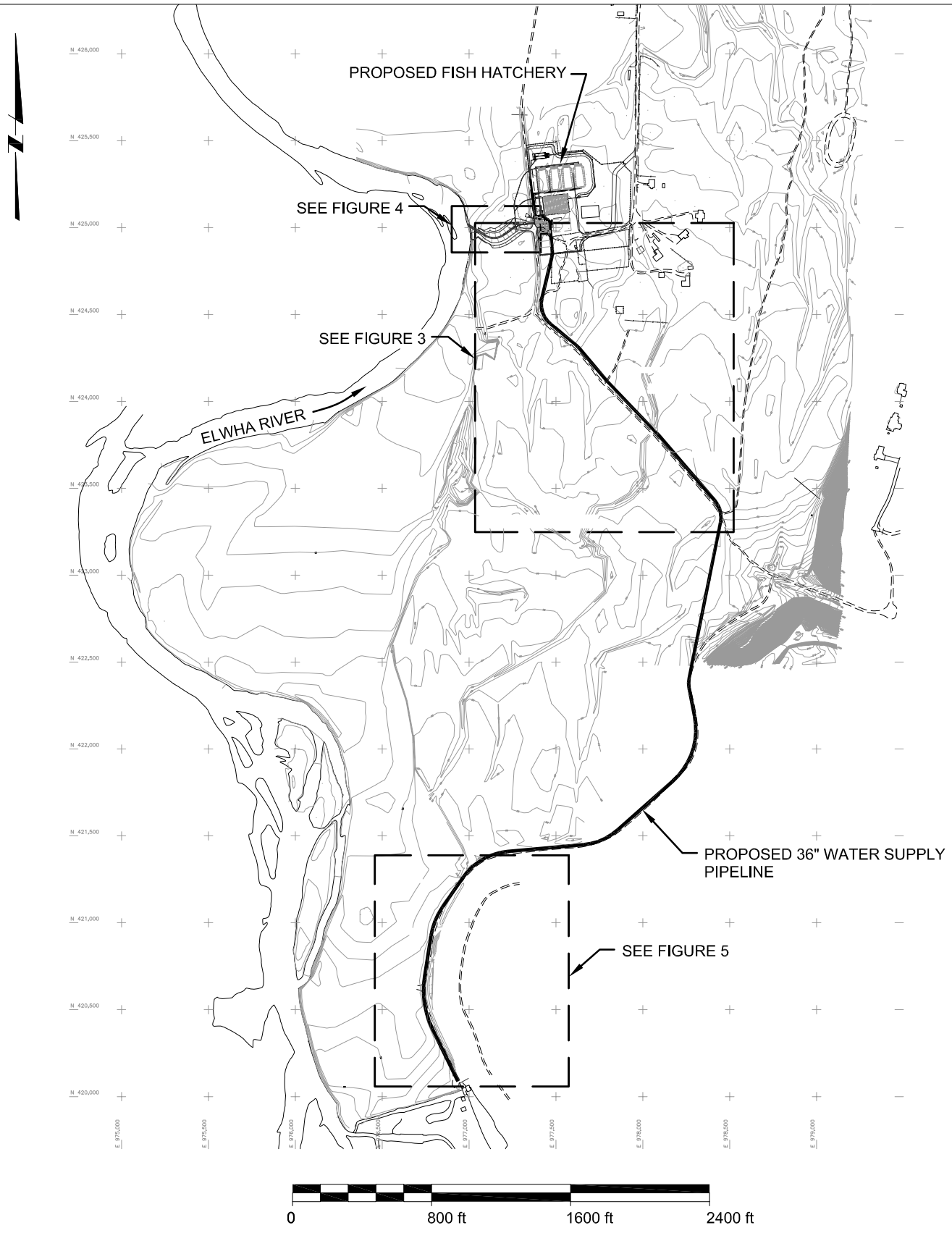
Approved upland sites. Topsoil will be used on slopes of levee and entrance channel to support revegetation. River alluvium (if suitable) will be used for site grading in connection with the hatchery construction.

D. METHOD OF DREDGING

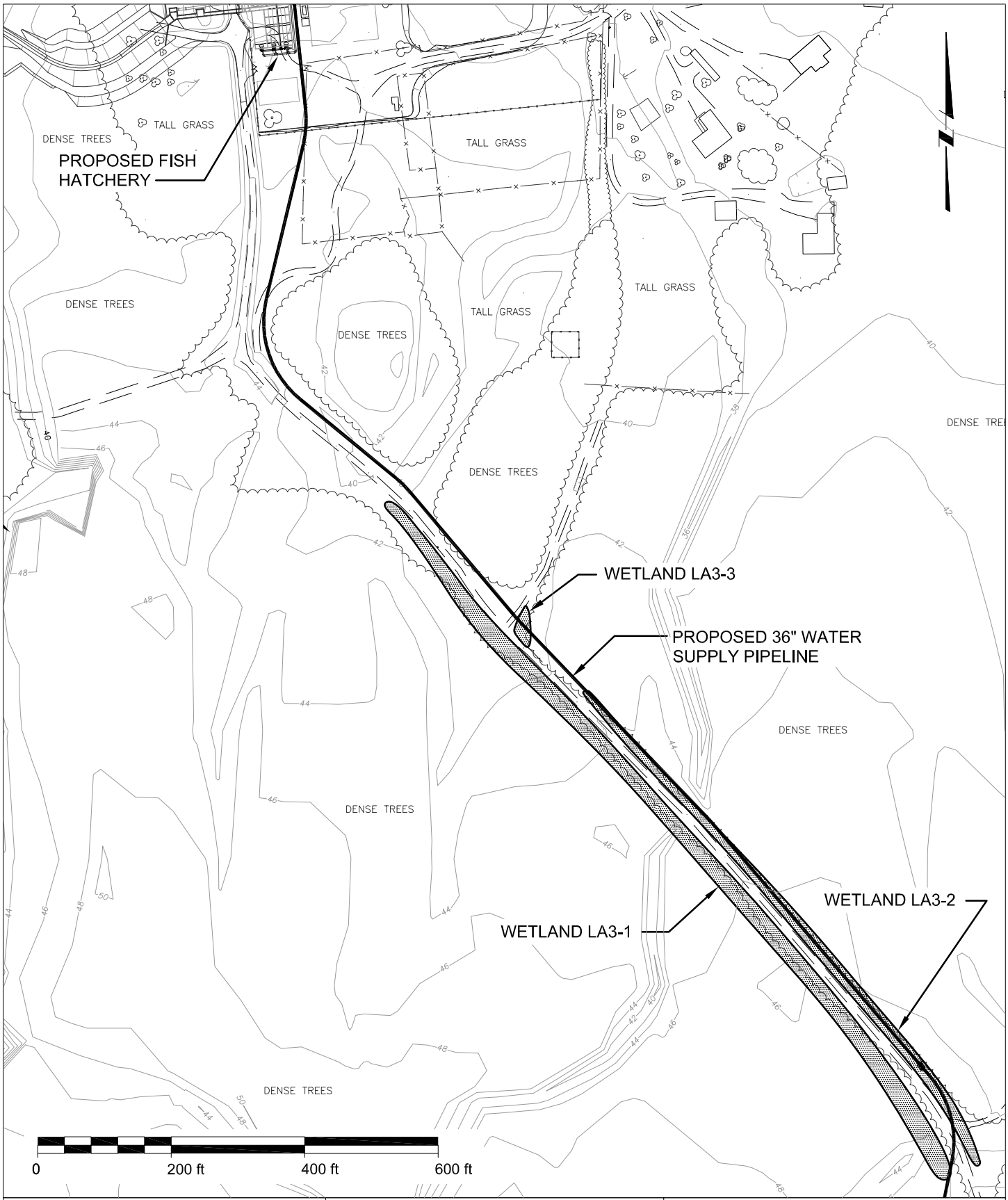
Hydraulic excavation or similar conventional earthmoving equipment.



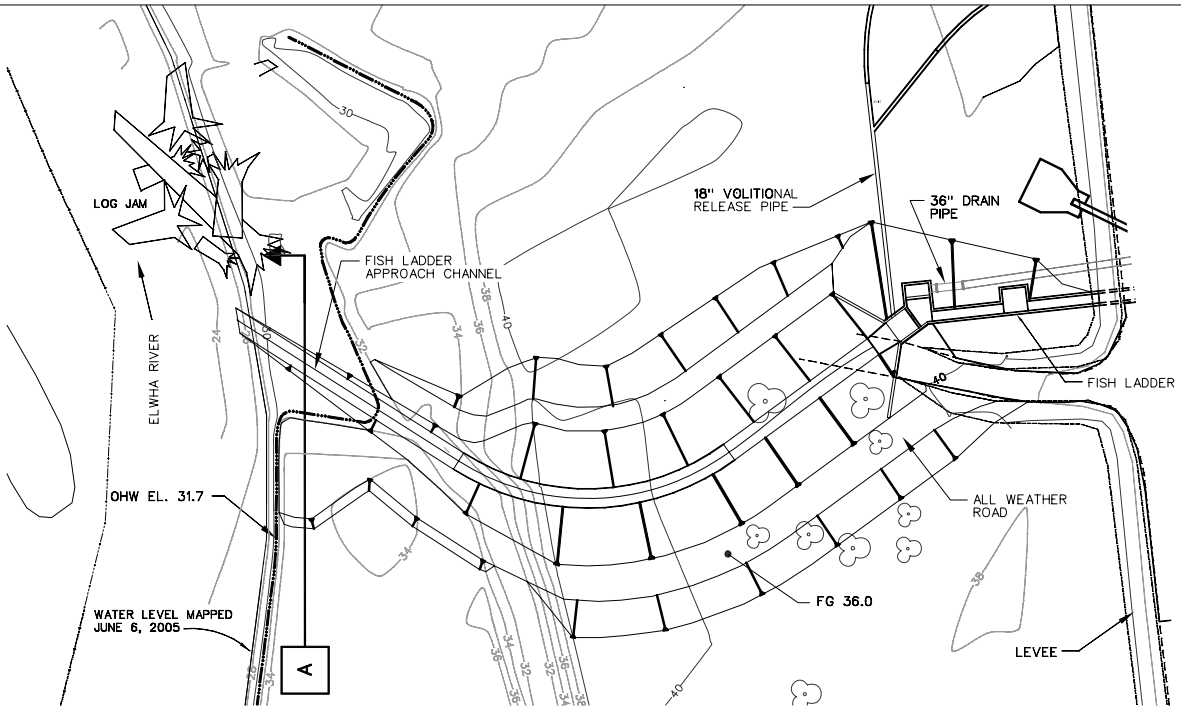
PURPOSE: Fish Production ADJOINING PROPERTY OWNERS: See JARPA	Lower Elwha Klallam Tribal Community Elwha River Restoration Project Elwha Fish Hatchery Project	PROPOSED: Fish Hatchery Construction REFERENCE: Elwha River Restortation Project USACE REF # 2006 0034 LEKT Projects - Page 7 of 25 NEAR: Port Angeles, WA APPLICATION BY: FIGURE 1 OF 5 DATE:



PURPOSE: Fish Production ADJOINING PROPERTY OWNERS: See JARPA	Lower Elwha Klallam Tribal Community Elwha River Restoration Project Elwha Fish Hatchery Project	PROPOSED: Fish Hatchery Construction REFERENCE: Elwha River Restortation Project USACE REF # 2006 0034 LEKT Projects - Page 8 of 25 NEAR: Port Angeles, WA APPLICATION BY: FIGURE 2 OF 5 DATE:

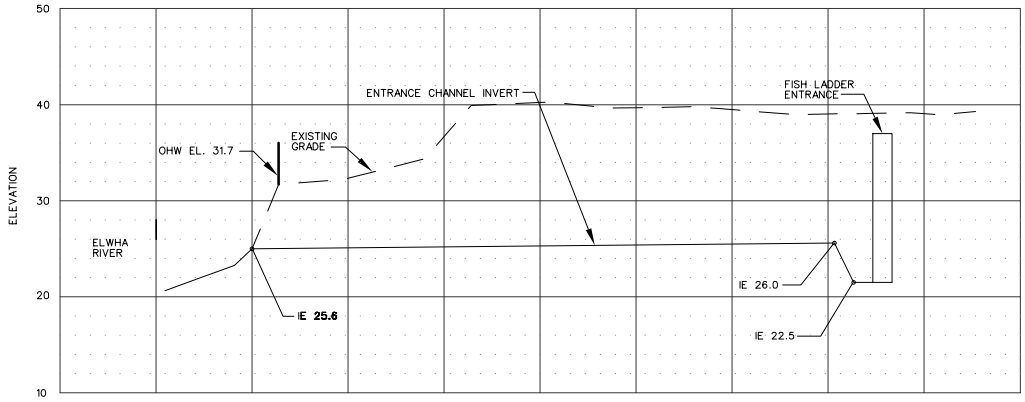


PURPOSE: Fish Production ADJOINING PROPERTY OWNERS: See JARPA	Lower Elwha Klallam Tribal Community Elwha River Restoration Project Elwha Fish Hatchery Project	PROPOSED: Fish Hatchery Construction REFERENCE: Elwha River Restortation Project USACE REF # 2006 0034 LEKT Projects - Page 9 of 25 NEAR: Port Angeles, WA APPLICATION BY: FIGURE 3 OF 5 DATE:



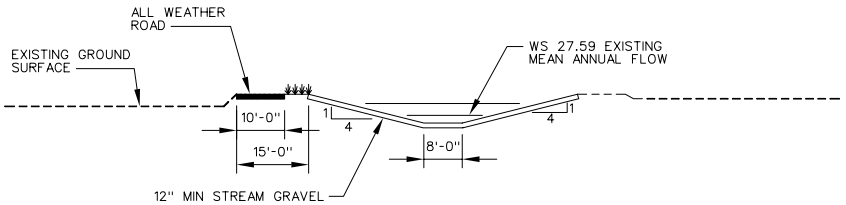
FISH LADDER ENTRANCE CHANNEL PLAN

0 80 ft 160 ft 240 ft



CHANNEL PROFILE

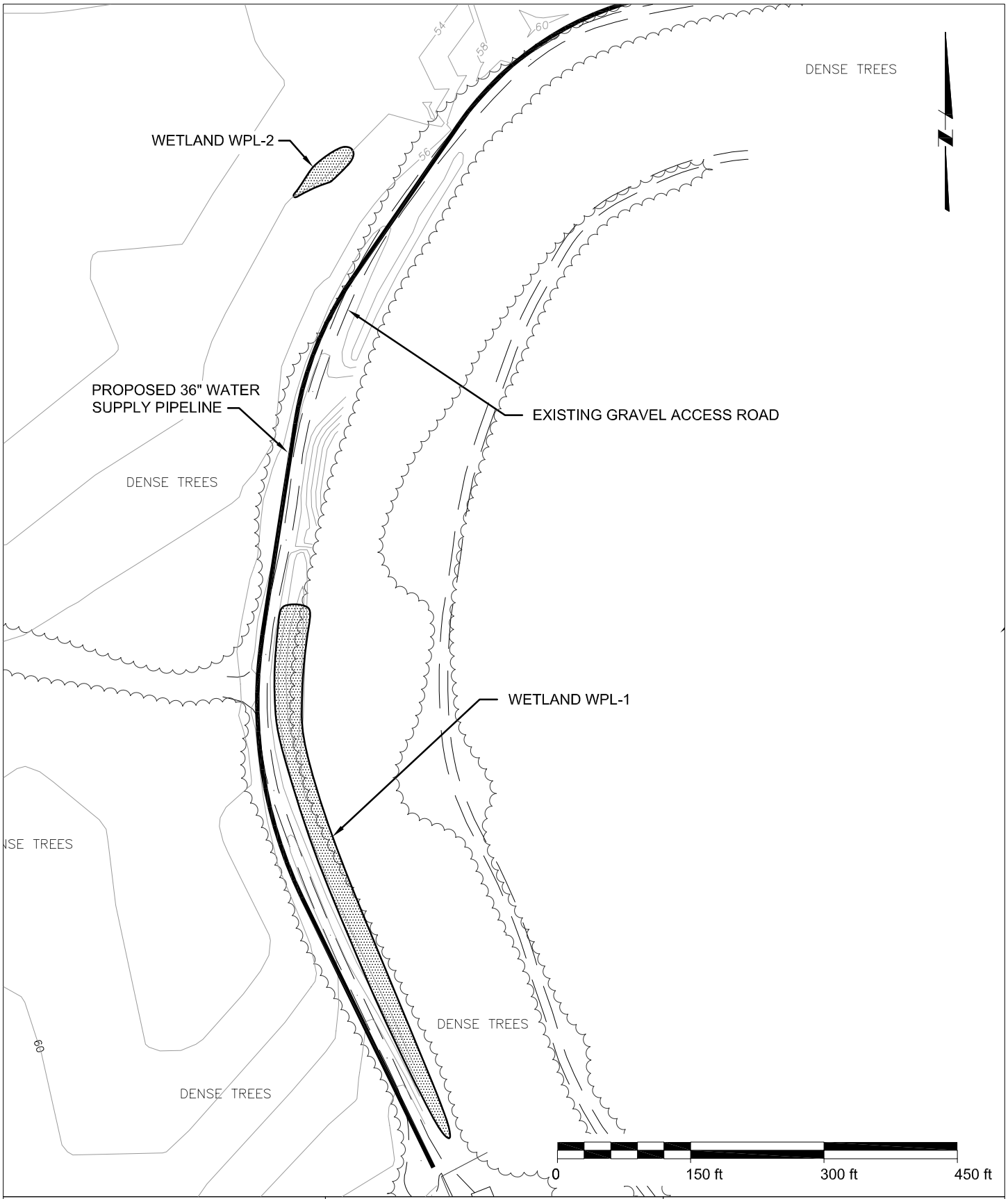
0 20 ft 40 ft 60 ft



CHANNEL SECTION A

NTS

PURPOSE: Flood Production ADJOINING PROPERTY OWNERS: See JARPA	Lower Elwha Klallam Tribal Community Elwha River Restoration Project Elwha Fish Hatchery Project	PROPOSED: Fish Hatchery Construction REFERENCE: Elwha River Restortation Project USACE REF # 2006 0034 LEKT Projects - Page 10 of 25 NEAR: Port Angeles, WA APPLICATION BY: FIGURE 4 OF 5 DATE:



PURPOSE: Fish Production

ADJOINING PROPERTY OWNERS:
See JARPA

Lower Elwha Klallam Tribal Community

Elwha River Restoration Project

Elwha Fish Hatchery Project

PROPOSED: Fish Hatchery Construction

REFERENCE: Elwha River Restortation Project
USACE REF # 2006 0034
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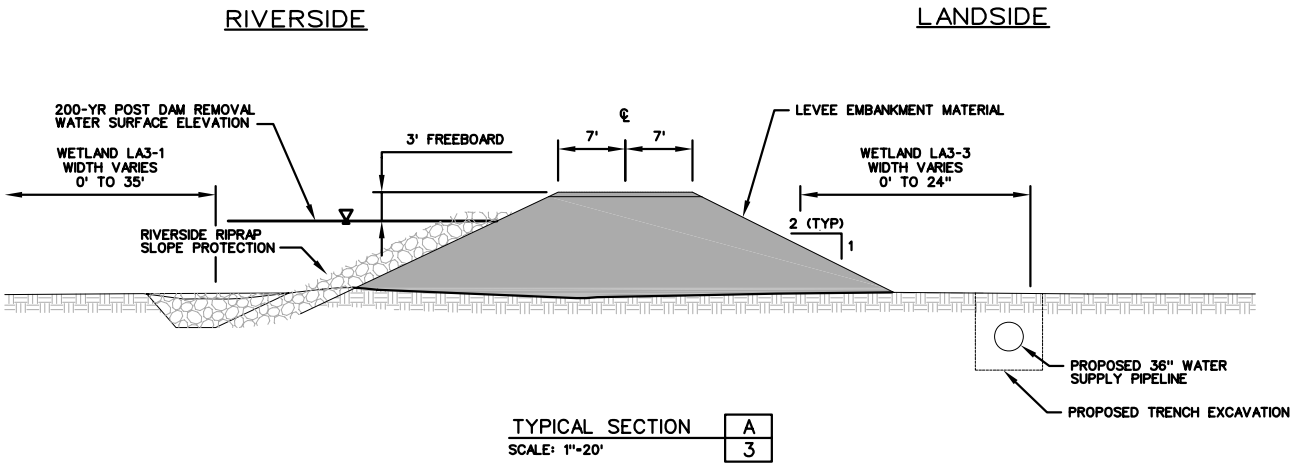
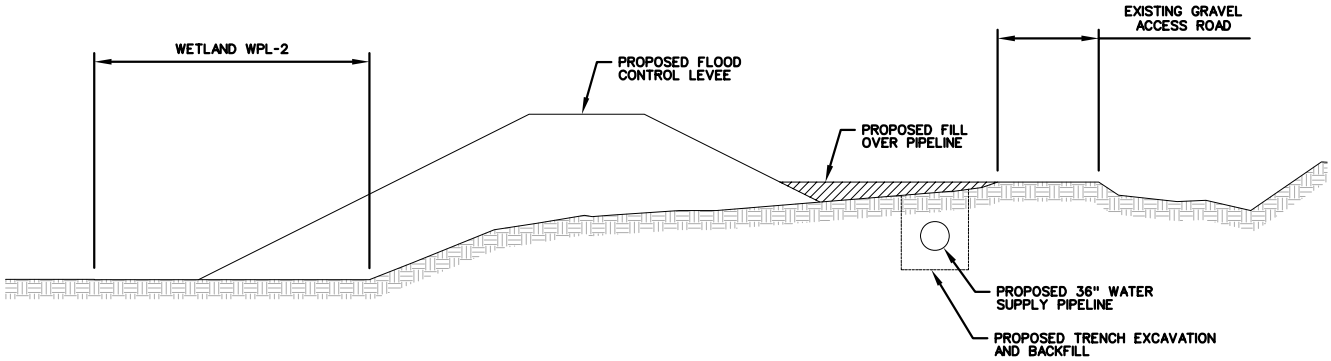
NEAR: Port Angeles, WA

APPLICATION BY:

FIGURE 5 OF 5 DATE:

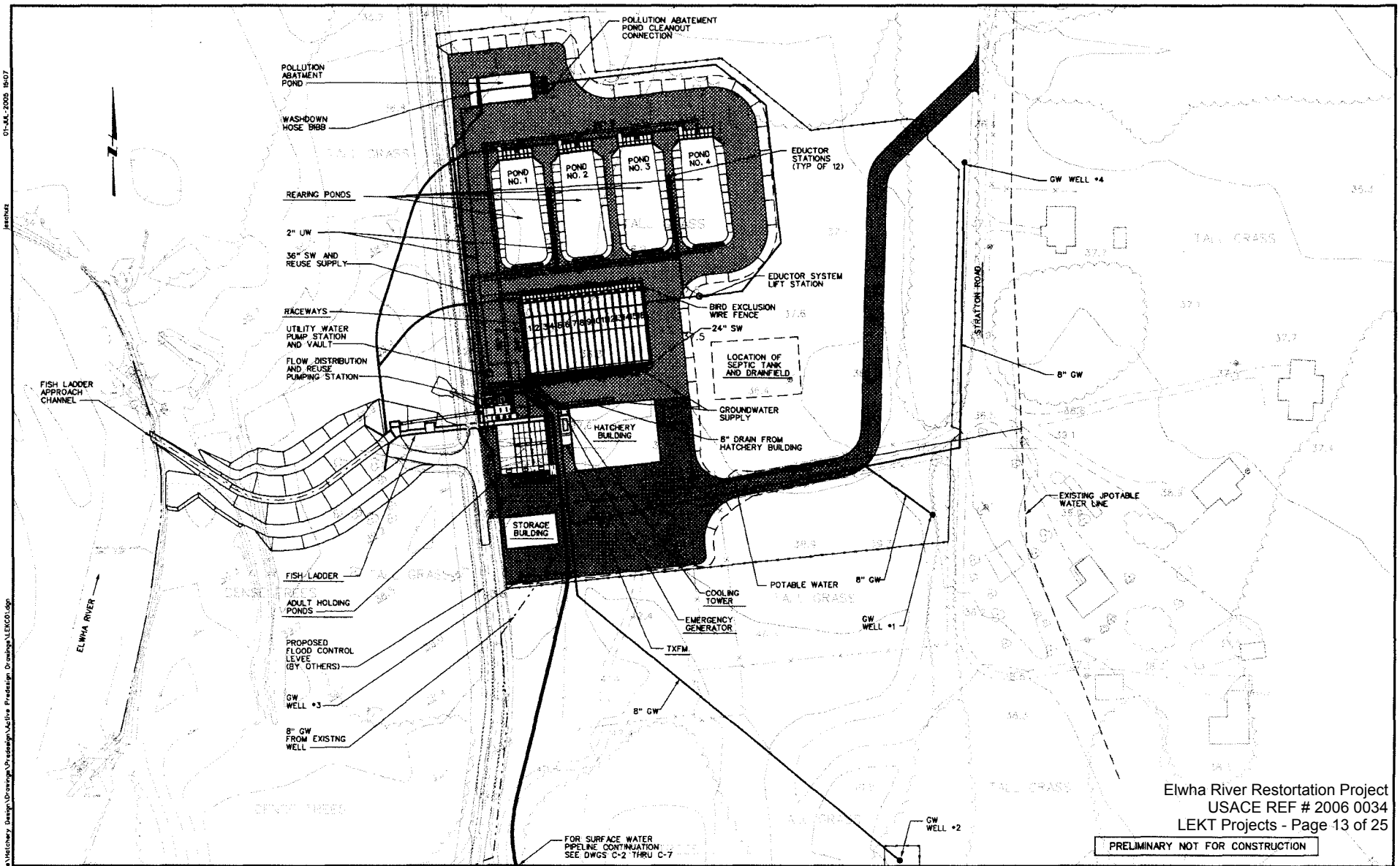


TYPICAL SECTION A
SCALE: 1"=20' 3



TYPICAL SECTION B
SCALE: 1"=20' 3

PURPOSE: Fish Production ADJOINING PROPERTY OWNERS: See JARPA	Lower Elwha Klallam Tribal Community Elwha River Restoration Project Elwha Fish Hatchery Project	PROPOSED: Fish Hatchery Construction REFERENCE: Elwha River Restortation Project USACE REF # 2006 0034 LEKT Projects - Page 12 of 25 NEAR: Port Angeles, WA APPLICATION BY: FIGURE 6 OF 6 DATE:



Elwha River Restortation Project
USACE REF # 2006 0034
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PRELIMINARY NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE 1"=50'

WARNING 0 ½ 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED C W SMITH
DRAWN J E SCHULZ
CHECKED C W CUTTING

SUBMITTED BY
(PROJECT MANAGER'S NAME) LICENSE NO. DATE
(COMPANY OFFICER'S NAME) LICENSE NO. DATE

MWH Bellevue Washington

LOWER ELWHA KLALLAM TRIBAL COMMUNITY
LOWER ELWHA FISH HATCHERY

100% PREDESIGN

SITE PLAN

SHEET C-1

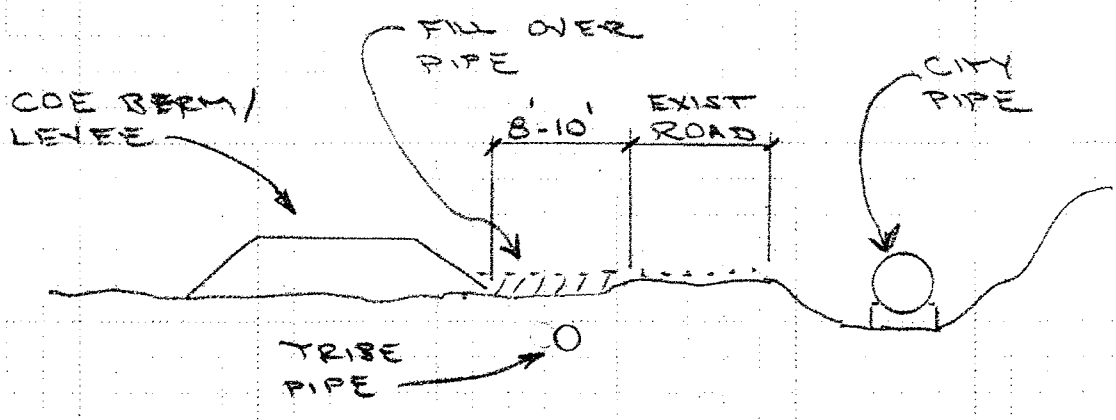
1520734

01-JUL-2005 15:07 jaschulz G:\Elwha Tribe\Hatchery Design\Drawings\Predesign\Active Predesign Drawings\LEKC01.dgn

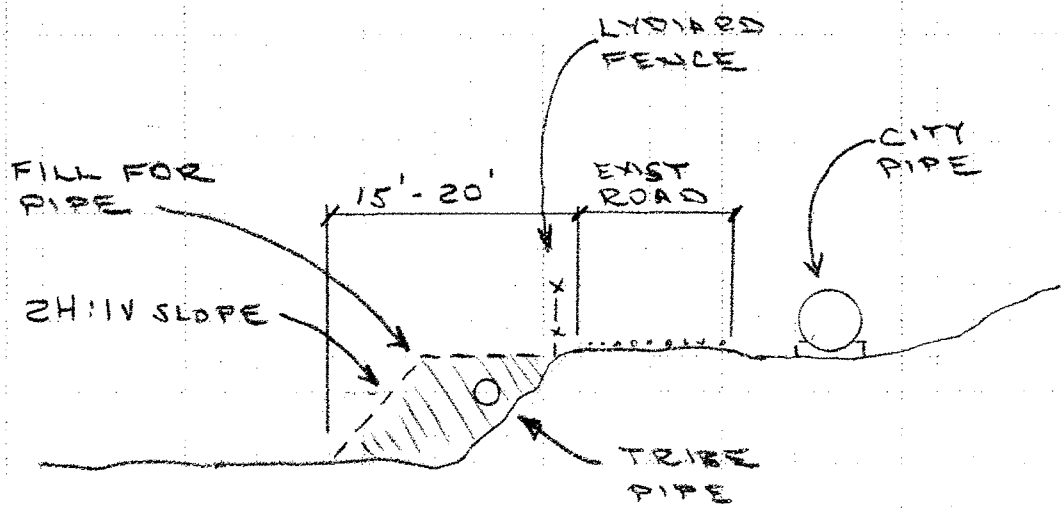
MWH

By CWC Date Apr '06 Client Elwha Tribe Sheet 1 of 1

Chkd. By _____ Description COE BERM / TRIBE PIPE RELATIONSHIP Job No. 152078G



COE STA PB 2+00 ≈ TRIBE STA 62+00



TRIBE STA 36+00

Lower Elwha Klallam Tribal Projects - **Flood Control Levee Extension Project**
Text for inclusion in the Elwha River Restoration Project JARPA
All bold text is copied from the JARPA application. All responses are in normal text.

SECTION A

4. NAME, ADDRESS, AND PHONE NUMBER OF PROPERTY OWNER(S), IF OTHER THAN APPLICANT.
Lower Elwha Klallam Tribe, 2851 Lower Elwha Road, Port Angeles, Clallam County, Washington 98363

5. LOCATION (STREET ADDRESS, INCLUDING CITY, COUNTY AND ZIP CODE, WHERE PROPOSED ACTIVITY EXISTS OR WILL OCCUR)
Lower Elwha Reservation, Port Angeles, Clallam County, Washington 98363

LOCAL GOVERNMENT WITH JURISDICTION (CITY OR COUNTY)
Lower Elwha Klallam Tribe

WATERBODY
Elwha River

TRIBUTARY OF
N/A

WRIA#
18

¼ SECTION
NE1/4 and SE1/4

SECTION
34

TOWNSHIP
31N

RANGE
7W

SHORELINE DESIGNATION
N/A

ZONING DESIGNATION
Tribal Lands

DNR STREAM TYPE, IF KNOWN
F

6. DESCRIBE THE CURRENT USE OF THE PROPERTY, AND THE STRUCTURES EXISTING ON THE PROPERTY. IF ANY PORTION OF THE PROPOSED ACTIVITY IS ALREADY COMPLETED ON THIS PROPERTY, INDICATE THE MONTH AND YEAR OF COMPLETION.

Property is currently rural residential and tribal government facilities adjacent to the existing federal flood control levee. The existing 1.5 mile federal levee is proposed for modification, including a 485 foot northern extension and a 0.3 mile southern extension. No portion of the proposed levee improvements have been completed at this time.

IS THIS PROPERTY ON AGRICULTURAL LAND?
No

ARE YOU A USDA PROGRAM PARTICIPANT?
No

7.a. DESCRIBE THE PROPOSED CONSTRUCTION AND/OR FILL WORK FOR THE PROJECT THAT YOU WANT TO BUILD THAT NEEDS AQUATIC PERMITS: COMPLETE PLANS AND SPECIFICATIONS SHOULD BE PROVIDED FOR ALL WORK WATERWARD OF THE ORDINARY HIGH WATER MARK OR LINE, INCLUDING TYPES OF EQUIPMENT TO BE USED. IF APPLYING FOR A SHORELINE PERMIT, DESCRIBE ALL WORK WITHIN AND BEYOND 200 FEET OF THE ORDINARY HIGH WATER MARK. ATTACH A SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED.

No work will take place waterward of the Ordinary High Water Mark.

7. b. DESCRIBE THE PURPOSE OF THE PROPOSED WORK AND WHY YOU WANT OR NEED TO PERFORM IT AT THE SITE. PLEASE EXPLAIN ANY SPECIFIC NEEDS THAT HAVE INFLUENCED THE DESIGN.
The existing federal flood control levee provides flood protection to the 200-year flood frequency level. Removal of the Elwha Dams will increase the 200-year flood elevation. The purpose of the proposed Elwha Levee improvements is to provide flood protection for Tribal Lands up to the 200-year post dam removal flood elevation.

7. c. DESCRIBE THE POTENTIAL IMPACTS TO THE CHARACTERISTIC USES OF THE WATER BODY. THESE USES MAY INCLUDE FISH OR AQUATIC LIFE, WATER QUALITY, WATER SUPPLY, RECREATION AND AESTHETICS. IDENTIFY PROPOSED ACTIONS TO AVOID, MINIMIZE, OR MITIGATE DETRIMENTAL IMPACTS, AND PROVIDE PROPER PROTECTION OF FISH AND AQUATIC LIFE. ATTACH A SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED.

As with the existing levee, which provides flood protection to tribal lands, the characteristic uses of the Elwha River will remain unchanged due to the levee improvements. Potential long-term impacts as a result of the project include a more confined water surface during the 200-year recurrence flood event within 1.3 miles of the mouth of the Elwha River.

Loss of 1.42 acres of wetlands as listed below.

Short-term Impacts due to Construction Include:

- Temporary removal of riparian vegetation potentially affecting wildlife life and the aesthetic character of the riparian area.

Long-term Impacts Include:

- Alteration of the character of the high flow streambed and the river hydrology

Mtigation Measures during Construction Include:

- Minimizing the impacts to existing, healthy vegetation to the extent possible.
- Use of proactive and reactive BMP's at the site.
- Use of berms, dikes and silt fencing to isolate the construction area from the river.
- Mulches and erosion control fabrics will be used in highly erosive areas.
- Use of bioengineered techniques for river bank stability where practicable.

Mitigation Measures for Long-Term Impacts Include:

- Selected riparian plant species will be compatible with the overall management objectives of the Elwha River corridor. Sample species include Big-Leaf Maple (*Acer macrophyllum*), Red Alder (*Alnus Rubra*), Salal (*Gaultheria Shallon*), Low Oregon Grape (*Mahonia Nervosa*), Sedge (*Carex Sp*.), and Tufted Hairgrass (*Deschampsia Caespitosa*). .
- Plant species will be carefully matched to the soil and sun exposure for which they are best suited.
- Use of local nursery stocks will be emphasized.

8. WILL THE PROJECT BE CONSTRUCTED IN STAGES?
Yes, construction of the levee improvements will be separate from other elements of the project.

PROPOSED STARTING DATE:
Prior to dam removal

ESTIMATED DURATION OF ACTIVITY:
Approximately 6 months.

9. CHECK IF ANY STRUCTURES WILL BE PLACED:

WATERWARD OF THE ORDINARY HIGH WATER MARK OR LINE FOR FRESH OR TIDAL WATERS.
No

WATERWARD OF MEAN HIGH WATER LINE IN TIDAL WATERS
No

10. WILL FILL MATERIAL (ROCK, FILL, BULKHEAD, OR OTHER MATERIAL) BE PLACED?

WATERWARD OF THE ORDINARY HIGH WATER MARK OR LINE FOR FRESH OR TIDAL WATERS.
No

WATERWARD OF MEAN HIGH WATER LINE IN TIDAL WATERS.
No

11. WILL MATERIAL BE PLACED IN WETLANDS?
Yes.

IF YES,

A. IMPACTED AREA IN ACRES:

The total wetland area impacted by the Elwha Flood Control Project is

Wetland Name	Classification	Approx. Area Impacted

FL-A	DOE Category III	0.04 acres
FL-B	DOE Category III	0.05 acres
FL-C	DOE Category IV	<0.01 acres
FL-D	DOE Category IV	<0.01 acres
LA3-1	DOE Category IV	0.9 acres
LA3-2	DOE Category IV	0.4 acres
LA3-3	DOE Category IV	<0.01 acres

The total wetland area to be impacted by levee construction is approximately 1.42 acres.

B. HAS A DELINEATION BEEN COMPLETED? IF YES, PLEASE SUBMIT WITH APPLICATION.
Yes

C. HAS A WETLAND REPORT BEEN PREPARED? IF YES, PLEASE SUBMIT WITH APPLICATION.
Yes

D. TYPE AND COMPOSITION OF FILL MATERIAL (E.G. SAND, ETC):
Fill material will consist of imported levee embankment material, quarry spalls, and rock riprap of varying sizes.

E. MATERIAL SOURCE:
Materials will be acquired locally from approved gravel pits and quarries.

F. LIST ALL SOIL SERIES (TYPE OF SOIL) LOCATED AT THE PROJECT SITE, & INDICATE IF THEY ARE ON THE COUNTY'S LIST OF HYDRIC SOILS. SOILS INFORMATION CAN BE OBTAINED FROM THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS):
Puget Silt Loam, listed as a hydric soil with Clallam County.
Typic Xerofluvents, nearly level. Not listed as a hydric soil.

G. WILL PROPOSED ACTIVITY CAUSE FLOODING OR DRAINING OF WETLANDS?
Yes, construction of the toe drain ditch along the levee will result in draining of wetlands FL-B, FL-C and FL-D.

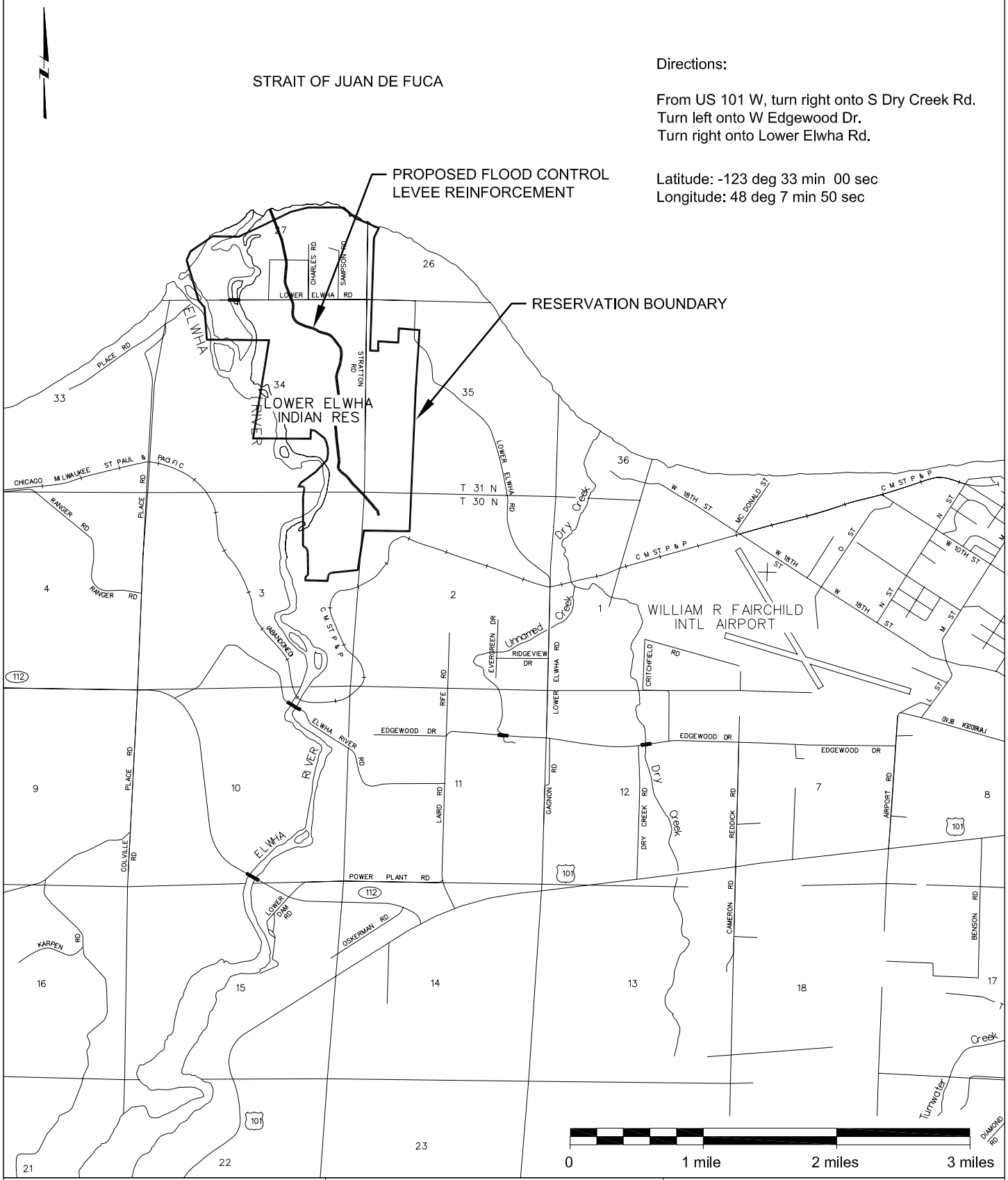
13. WILL EXCAVATION OR DREDGING BE REQUIRED IN WATER OR WETLANDS?
Yes, construction of the riverside riprap slope protection will require excavation in wetlands FL-A and LA3-1.

A. VOLUME: 1,500 cubic yards **AREA:** 0.94 acres

B. COMPOSITION OF MATERIAL TO BE REMOVED:
River alluvium and topsoil.

C. DISPOSAL SITE FOR EXCAVATED MATERIAL:
Approved upland sites. Top soil may be used on slopes of levee to support revegetation.

D. METHOD OF DREDGING
Hydraulic excavator or similar conventional earthmoving equipment.

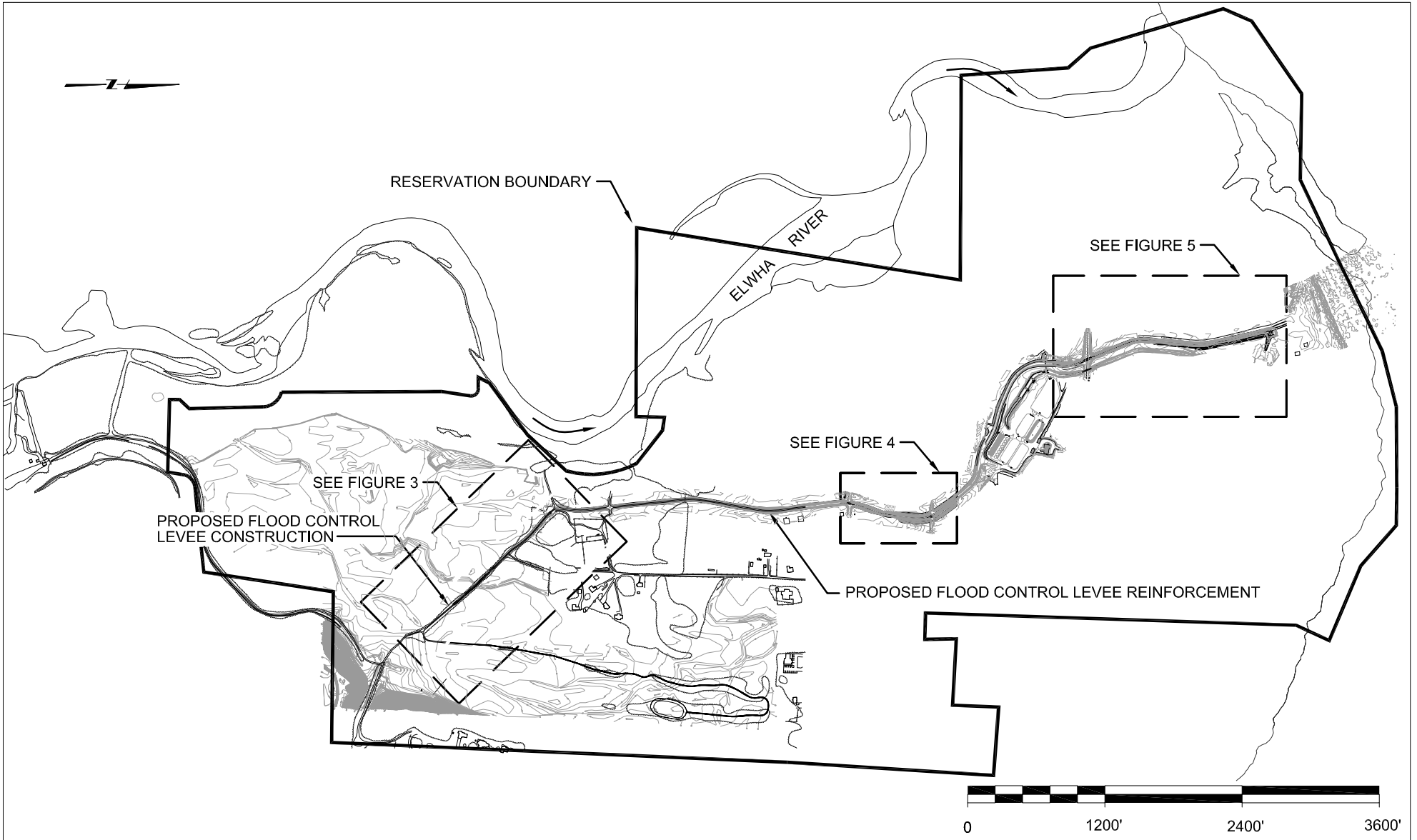


Directions:

From US 101 W, turn right onto S Dry Creek Rd.
Turn left onto W Edgewood Dr.
Turn right onto Lower Elwha Rd.

Latitude: -123 deg 33 min 00 sec
Longitude: 48 deg 7 min 50 sec

PURPOSE: Flood Protection ADJOINING PROPERTY OWNERS: See JARPA	Lower Elwha Klallam Tribal Community Elwha River Restoration Project Elwha Flood Control Project	PROPOSED: Levee Reinforcement/Construction REFERENCE: Elwha River Restortation Project USACE REF # 2006 00334 LEKT Projects - Page 19 of 25 NEAR: Port Angeles, WA APPLICATION BY: FIGURE 1 OF 7 DATE:



PURPOSE: Flood Protection

ADJOINING PROPERTY OWNERS:
See JARPA

Lower Elwha Klallam Tribal Community

Elwha River Restoration Project

Elwha Flood Control Project

PROPOSED: Levee Reinforcement/Construction

REFERENCE:

NEAR: Port Angeles, WA

APPLICATION BY:

FIGURE 2 OF 7 DATE:

Elwha River Restortation Project
USACE REF # 2006 00334
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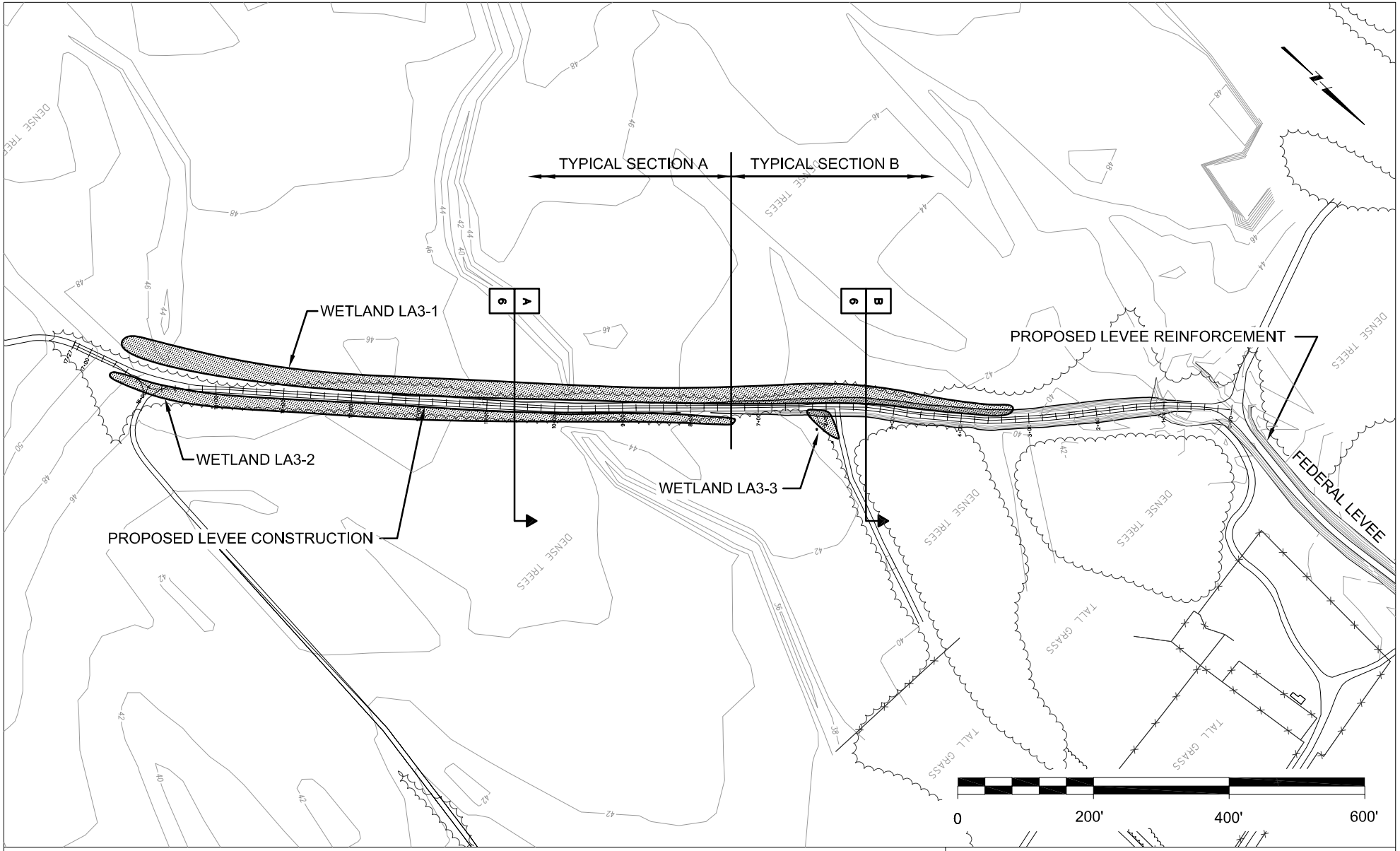


PURPOSE: Flood Protection

ADJOINING PROPERTY OWNERS:
See JARPA

Lower Elwha Klallam Tribal Community

Elwha River Restoration Project

Elwha Flood Control Project

PROPOSED: Levee Reinforcement/Construction

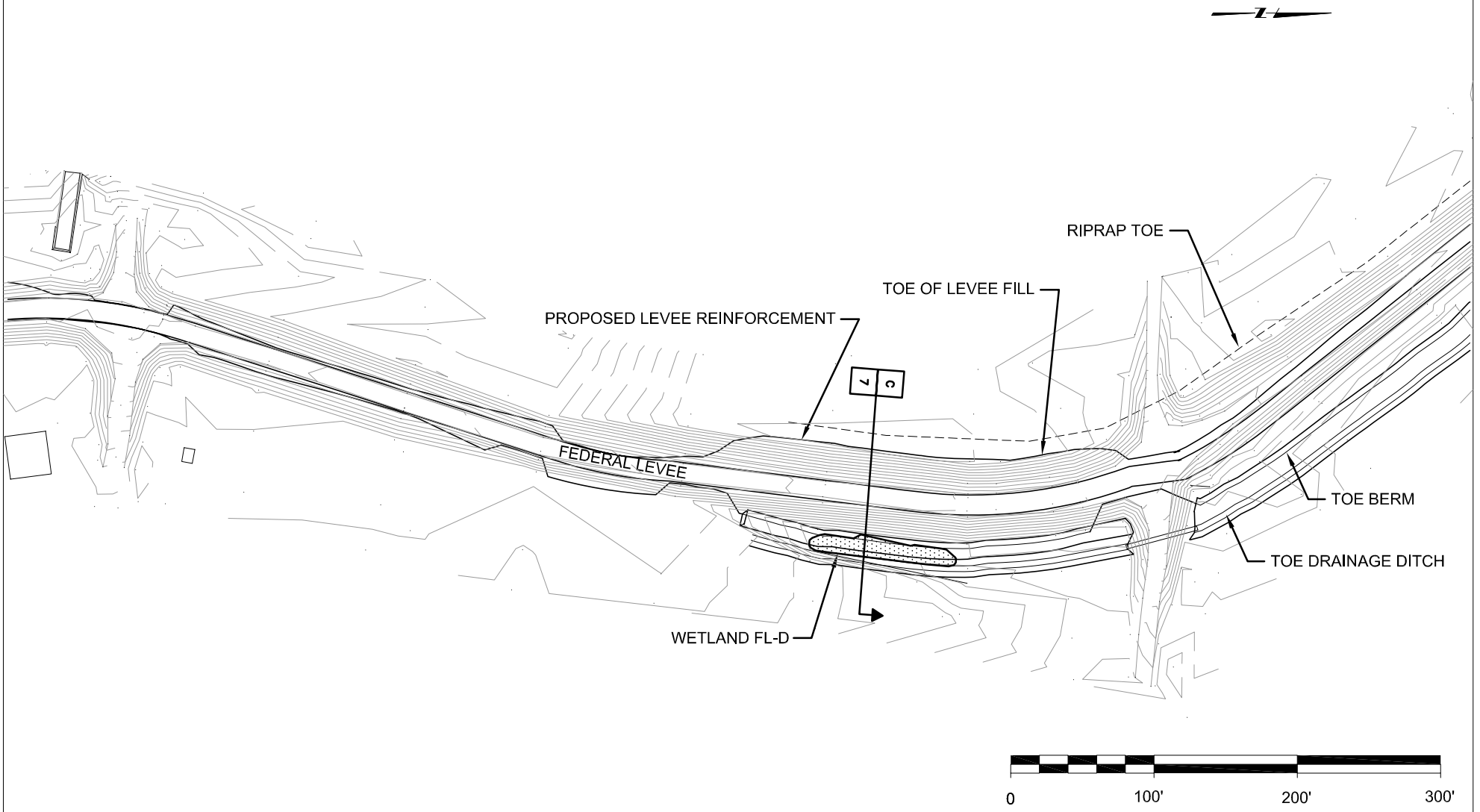
REFERENCE:

NEAR: Port Angeles, WA

APPLICATION BY:

FIGURE 3 OF 7 DATE:

Elwha River Restortation Project
USACE REF # 2006 00334
LEKT Projects - Page 21 of 25



PURPOSE: Flood Protection

ADJOINING PROPERTY OWNERS:
See JARPA

Lower Elwha Klallam Tribal Community

Elwha River Restoration Project

Elwha Flood Control Project

PROPOSED: Levee Reinforcement/Construction

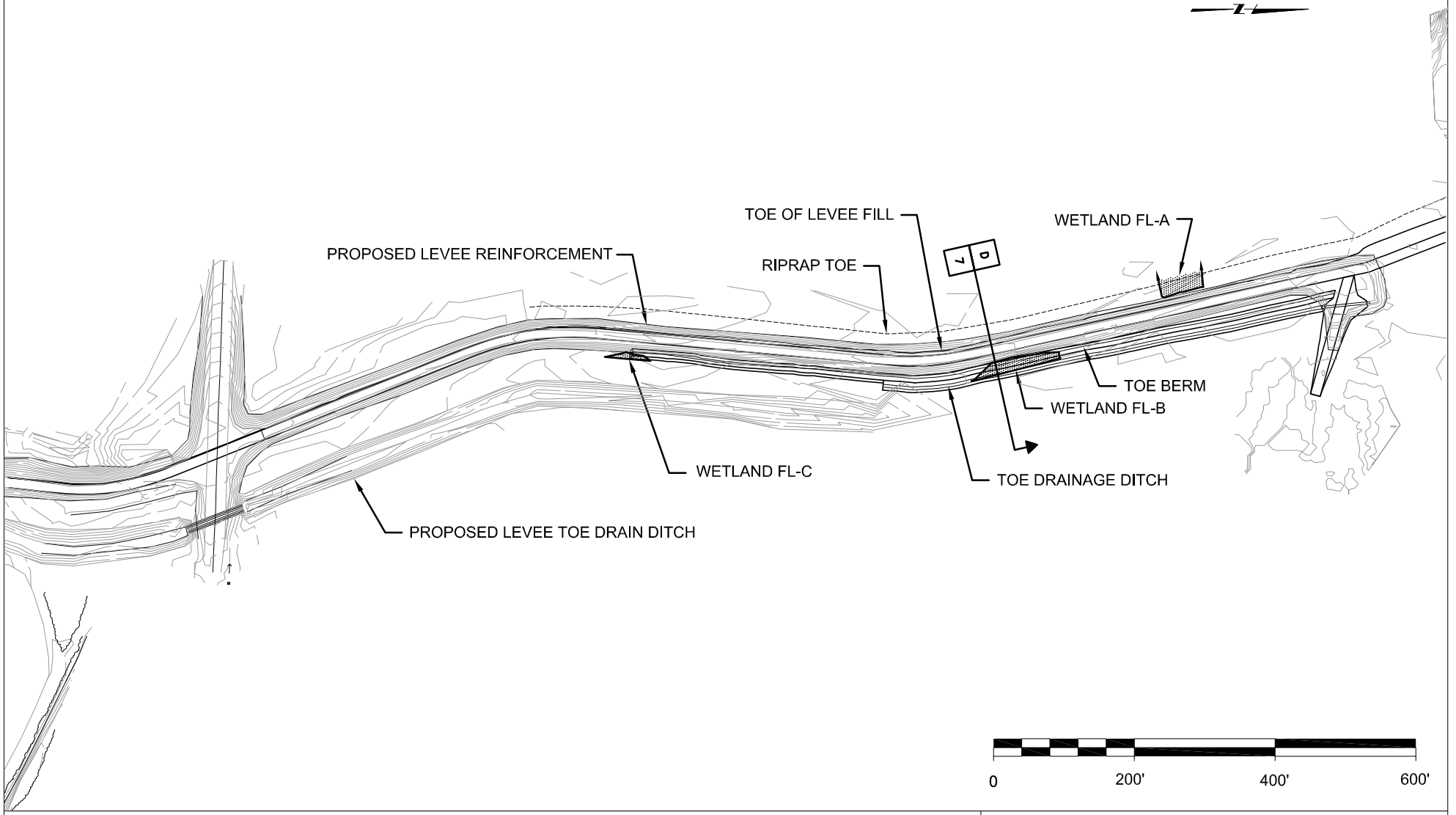
REFERENCE:

NEAR: Port Angeles, WA

APPLICATION BY:

FIGURE 4 OF 7 DATE:

Elwha River Restortation Project
USACE REF # 2006 00334
LEKT Projects - Page 22 of 25



PURPOSE: Flood Protection

ADJOINING PROPERTY OWNERS:
See JARPA

Lower Elwha Klallam Tribal Community

Elwha River Restoration Project

Elwha Flood Control Project

PROPOSED: Levee Reinforcement/Construction

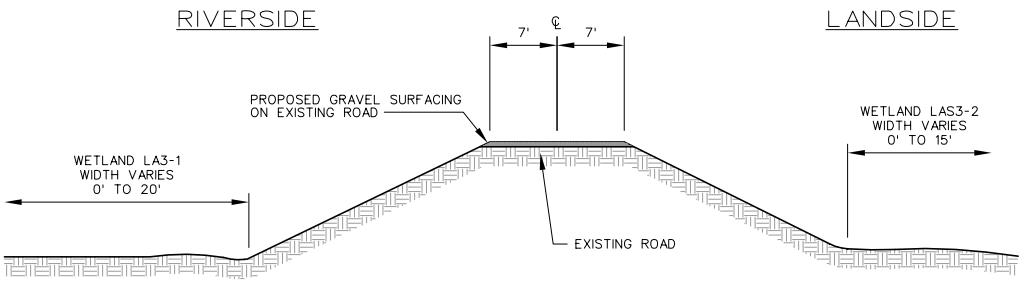
REFERENCE:

NEAR: Port Angeles, WA

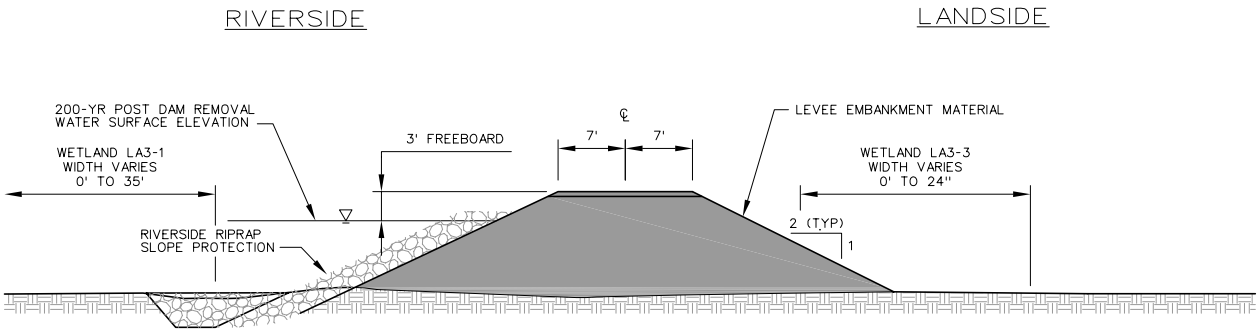
APPLICATION BY:

FIGURE 5 OF 7 DATE:

Elwha River Restortation Project
USACE REF # 2006 00334
LEKT Projects - Page 23 of 25



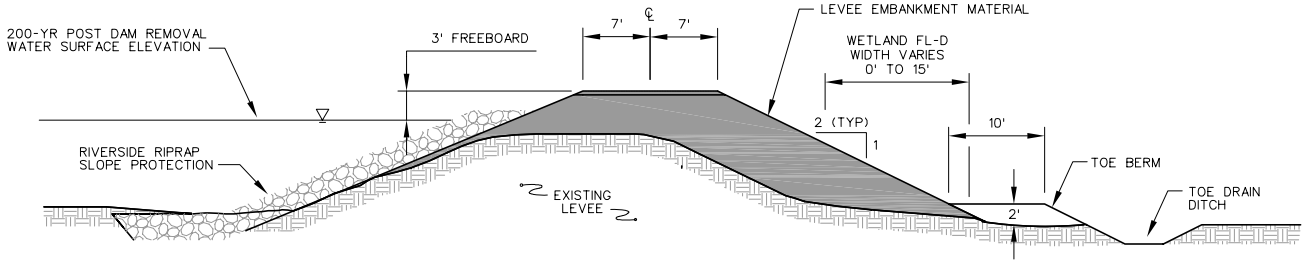
TYPICAL SECTION A
SCALE: 1"=20' 3



TYPICAL SECTION B
SCALE: 1"=20' 3

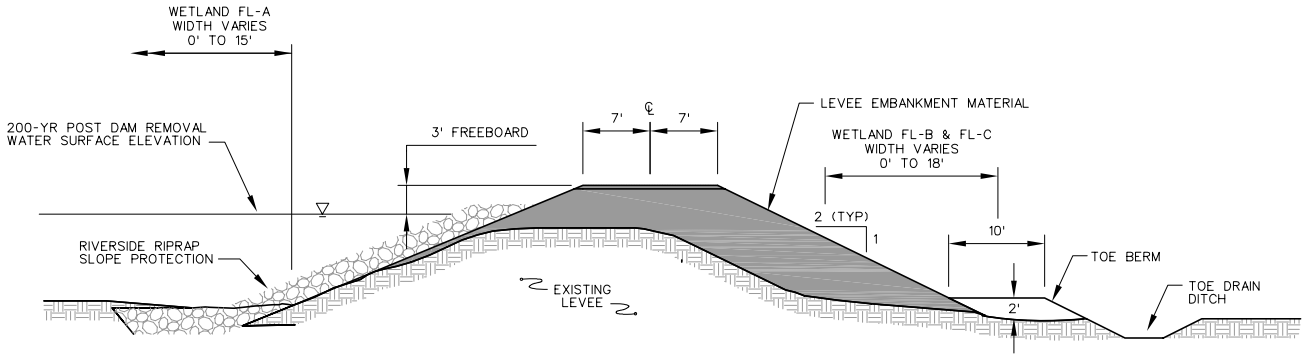
PURPOSE: Flood Protection ADJOINING PROPERTY OWNERS: See JARPA	Lower Elwha Klallam Tribal Community Elwha River Restoration Project ~~Elwha Fish Hatchery Project~~ Levee Cross-Section	PROPOSED: ~~Fish Hatchery Construction~~ REFERENCE: Elwha River Restortation Project USACE REF # 2006 00334 LEKT Projects - Page 24 of 25 NEAR: Port Angeles, WA APPLICATION BY: FIGURE 6 OF 7 DATE:

RIVERSIDE LANDSIDE



TYPICAL SECTION C
SCALE: 1"=20' 4

RIVERSIDE LANDSIDE



TYPICAL SECTION D
SCALE: 1"=20' 5

PURPOSE: Flood Protection ADJOINING PROPERTY OWNERS: See JARPA	Lower Elwha Klallam Tribal Community Elwha River Restoration Project ~~Elwha Fish Hatchery Project~~ Levee Cross-Section	PROPOSED: ~~Fish Hatchery Construction~~ REFERENCE: Elwha River Restortation Project USACE REF # 2006 00334 LEKT Projects - Page 25 of 25 NEAR: Port Angeles, WA APPLICATION BY: FIGURE 7 OF 7 DATE: